PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Peter J. SIMS *et al.*

Serial No.: 09/020,393

Filed: February 9, 1998

For: COMPOSITIONS AND METHODS TO INHIBIT FORMATION OF THE C5b-9 COMPLEX OF COMPLEMENT

Group Art Unit: 1644

Examiner: Phillip Gambel

Atty. Dkt. No.: OMRF:053US/SLH

CERTIFICATE OF MAILING
37 C.F.R 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date below:

November 30, 2005
Date

Steven L. Highlander

DECLARATION OF PETER J. SIMS UNDER 37 C.F.R. §1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I, the undersigned, do declare that:

1. I am a United States citizen and I currently hold the position of Professor in the Department of Molecular and Experimental Medicine at the Scripps Research Institute, La Jolla, California. I am the Peter J. Sims named as an inventor on the above-captioned application.

2. I received a B.A. in Biophysics from Amherst College, and both an M.D. and Ph.D. from Duke University. I have been conducting research in the areas of complement and inflammation for over 25 years, and have more than 100 refereed journal publications. I am also the named inventor on 14 issued U.S. Patents, most of which relate to aspects of complement-mediated inflammation. A copy of my *curriculum vitae* is attached.

3. I have reviewed the instant specification of the above-captioned application, along with the pending claims and the Official Action dated October 23, 2005. It is my understanding that examiner is arguing that applicants were not "in possession" of subject matter now being claimed. More specifically, I understand the examiner to doubt that the application adequately describes peptidomimetics having the structure and function of human CD59 amino acid residues 42-58 of SEQ ID NO:3, where the peptidomimetic is a nucleic acid or a small molecule. I respectfully disagree with the examiner for the following reasons.

4. First, with regard to ***any*** mimetic, the specification provides specific instruction as to the ***structure*** that defines such compounds. The specification clearly indicates that the structure of human CD59 amino acid residues 42-58 of SEQ ID NO:3 must be faithfully reproduced by the mimetic. Thus, applicants were in possession of a wide variety of mimetic compounds – nucleic acids, peptides, or small molecules – that could satisfy this structural requirement.

5. Second, reference to the specification will reveal detailed discussion of how one goes about obtaining mimetics. For example, in one aspect, the specification instructs the skilled artisan to create or obtain libraries of artificial compounds produced by combinatorial chemistry and to select from those libraries those compounds that bind to regions of interest using both competitive and non-competitive formats (see pages 17-18 of the specification). This was a matter of routine at the time the instant application was filed. In other embodiments, a rational design is proposed, where compounds are modeled to retain the structural features of human CD59 amino acid residues 42-58 of SEQ ID NO:3 (see pages 18-24 of the specification). Detailed information on the application of computer modeling, and the synthetic generation of compounds, was provided. Either of these approaches can readily provide a plethora of compounds – nucleic acids, small molecules or peptides – that satisfy the recited structural requirements.

6. Thus, in my opinion, the specification adequately demonstrates that the application described of a large genus of mimetics at the time of filing, including those of nucleic acid and small molecule nature. The absence of specific examples of such compounds would not suggest otherwise.

7. I hereby declare that all statements made herein of my knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

11-28-2005
Date

Peter J. Sims, M.D, Ph.D

September 2005

CURRICULUM VITAE

Peter J. Sims, M.D., Ph.D.

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Spouse: Therese Wiedmer, Ph.D.

EDUCATION

Undergraduate: Amherst College, Amherst, MA
B.A. - January 1974, Summa Cum Laude
Major: Biophysics, Independent. Study

Graduate: Medical Scientist Training Program
Duke University School of Medicine
Durham, North Carolina
July 1974 - May 1980
M.D. - May, 1980
Ph.D. - May, 1980
Depts. of Physiology and Pharmacology

CERTIFICATION

Diplomate of National Board of Medical Examiners
Licensed Physician, Virginia 1980
Licensed Physician, Oklahoma 1985
Licensed Physician, Wisconsin 1992

CURRENT APPOINTMENT:

9/1/98 Professor
Dept. of Molecular & Experimental Medicine.
The Scripps Research Institute

PROFESSIONAL EXPERIENCE

6/80 to 6/82	Resident in Pathology (Clinical) University of Virginia Hospital
6/82 to 6/83	Fellow in Pathology University of Virginia Hospital
7/81 to 6/82	Research Instructor Department of Pathology University of Virginia Medical Center
7/82 to 6/85	Assistant Professor Department of Pathology and Department of Biochemistry, University of Virginia Medical Center
7/82 to 6/85	Director, Immunohematology Laboratory Associate Director, Blood Bank University of Virginia Hospital
7/85 to 6/89	Associate Member Cardiovascular Biology Research Program Oklahoma Medical Research Foundation
7/89-8/92	Member, Oklahoma Medical Research Foundation OMRF Professor of Medicine, Pathology, and Microbiology & Immunology College of Medicine The University of Oklahoma Health Sciences Center Consulting Staff Member Pathology & Transfusion Medicine HCA Presbyterian Hospital
1/92-8/92	Zyma Professeur Invite Institut de Biochimie, University of Lausanne Epalinges, Switzerland
9/92-9/98	Associate Director & Senior Investigator Blood Research Institute The Blood Center of Southeastern Wisconsin Professor of Pharmacology Clinical Professor of Pathology Medical College of Wisconsin

PROFESSIONAL/ACADEMIC HONORS

Sigma Xi, Amherst College, 1972
Phi Beta Kappa, Amherst College, 1972
B.A., Summa Cum Laude, Amherst College, 1974
Medical Scientist Traineeship (PHS), GM-07171, 1974-1980
Alpha Omega Alpha, Duke University School of Medicine, 1976
Southern Medical Association Research Award, 1981
Clinician-Scientist Award, American Heart Association, 1982
(Awarded but not activated in lieu of Hartford Fellowship)
John A. and George L. Hartford Fellowship in Biomedical Research
July, 1982 to June, 1985
N.I.H. Research Career Development Award
(Awarded but not activated in lieu of AHA Estabished Investigatorship)
Established Investigator of American Heart Association #85-128
October 1, 1985 to September 30, 1990
American Society for Clinical Investigation (Elected 1988)
S. Graham Smith Endowment Distinguished Scientist,
Oklahoma Medical Research Foundation, 1988 - 1992
Man-of-the-Year Award, American Heart Association,
Oklahoma Affiliate Chapter, 1989
President, American Heart Association,
Oklahoma Affiliate, June 1990 - June 1991
Chairman, Veterans Administration Merit Review Board - Hematology, 1991-1992
Zyma Foundation Visiting Professor
Institute of Biochemistry, Univ. of Lausanne, 1/192-8/31/92
Walter H. Schroeder Chair in Research,
The Blood Center of Southeastern Wisconsin, 1993-1999
N.I.H. (NHLBI) MERIT Award, 1995
Chairman, N.I.H. Hematology 1 Study Section Oct. 1999-Jul. 2001
Adjunct Professor Shanghai Second Medical University Shanghai, China Dec 2004 -

ACTIVE GRANT SUPPORT

NIH 5R37 HL/AI36061-21 Peter J. Sims, P.I.
"Function of a C5b-9 Inhibitor in Blood & Vascular Cells"
9/1/85 to 8/31/06 ANNUAL DIRECT COSTS: $283,559 (Total annual $504,617)

NIH 1R01 HL36946-18 Peter J. Sims, P.I.
"Role of PLSCR1 in Granulocyte Production and Maturation"
12/01/02 to 11/30/07 ANNUAL DIRECT COSTS: $250,000 (Total annual $469,250)

NIH 2R01HL063819-06 Peter J. Sims, P.I.
"Nuclear PL scramblase in differentiation & apoptosis"
7/01/05-6/30/10 ANNUAL DIRECT COSTS $250,000 (Total annual $469,250)

NIH 1R01 DK06939-01A1 Peter J. Sims, P.I.
"Role of PLSCR3 in Adipogenesis & Adipose Lipid Storage"

9/31/05 – 8/31/08 ANNUAL DIRECT COSTS $185,000 (Total annual $347,245)

NIH 1R01-CA89132-03 Robert H. Silverman, P.I. (Cleveland Clinic Fndn.)
"Role of Phospholipid Scramblase in Interferon Action" TSRI SUBCONTRACT TO PJS:
7/01/01 to 6/30/06 ANNUAL DIRECT COSTS: $109,099 (Total annual $200,287)

NIH 1R01 HL76215-02 (Therese Wiedmer, P.I.; Peter J. Sims, Co-PI))
"Role of PLSCR1 In Cell Response to Growth Factors"
04/01/04-3/31//08 ANNUAL DIRECT COSTS $250,000 (Total annual $469,250)

ISSUED PATENTS

U.S. Patent No. 5,135,916
(Issued August 4, 1992)
"Inhibition of Complement Mediated Inflammatory Response"
Inventors: Peter J. Sims & Therese Wiedmer
Assignment: Oklahoma Medical Research Foundation

U.S. Patent No. 5,550,108
(Issued August 27, 1996)
"Inhibition of Complement Mediated Inflammatory Response"
Inventors: Peter J. Sims & Therese Wiedmer
Assignment: Oklahoma Medical Research Foundation

U.S. Patent No. 5,635,178
(Issued June 3, 1997)
"Inhibition of Complement Mediated Inflammatory Response using Monoclonal Antibodies Specific for a Component of the C5b-9 Complex which Inhibit the Platelet or Endothelial Cell Activating Function of the C5b-9 Complex"
Inventors: Peter J. Sims & Therese Wiedmer
Assignement: Oklahoma Medical Research Foundation

U.S. Patent No. 5,573,940
(Issued November 12, 1996)
"Cells Expressing High Levels of CD59 (as amended)"
Inventors: Peter J. Sims & Alfred L.M. Bothwell
Assignment: Oklahoma Medical Research Foundation

U.S. Patent No. 5,660,825
(Issued August 26, 1997)
"Method of Inhibition of Complement Mediated Inflammatory Response"
Inventors: Peter Sims & Therese Wiedmer
Assignment: Oklahoma Medical Research Foundation

U.S. Patent No. 5,705,732
(Issued January 6, 1998)
"Universal Donor Cells"

Inventors: Peter J. Sims, A. Bothwell, S. Squinto, E. Elliot, R. Flavell, J. Madri, S. Rollins, L. Bell
Assignment: Oklahoma Medical Research Foundation, Yale University, Alexion Pharmaceuticals

U.S. Patent No. 5,763,156
(Issued June 9, 1998)
Inhibition of Complement Mediated Inflammatory Response:
DIV 4 Potentiometric Platelet Cross Match Procedures
Inventors: Peter J. Sims and Therese Wiedmer
Assignment: Oklahoma Medical Research Fndn.

U. S. Patent No. 5,843,884
(Issued Decmeber 1, 1998)
C9 Complement Inhibitor
Inventor: Peter J. Sims
Assignment: Oklahoma Medical Research Fndn

U.S. Patent No. 5,955,441
(Issued September 21, 1999)
Genetic Inhibition of complement mediated inflammatory response
Inventors: Peter J. Sims and Alfred LM Bothwell
Assignment: Oklahoma Medical Research Fndn & Yale University

U.S. Patent No. 6,100,443
(Issued August 8, 2000)
"Universal Donor Cells"
Inventors: Peter J. Sims, A. Bothwell, S. Squinto, E. Elliot, R. Flavell, J. Madri, S. Rollins, L. Bell
Assignment: Oklahoma Medical Research Foundation, Yale University, Alexion Pharmaceuticals

U.S. Patent No. 6,172,210
(Issued: January 9, 2001)
DNA Encoding Phospholipid Scramblase
Inventors: Therese Wiedmer and Peter J. Sims
Assignment: The Blood Center Research Fndn.

U.S. Patent No.6,204,035
Issued: March 20, 2001
Methods and Compositions to Alter the Cell Surface Expression of Phosphatidylserine and Other Clot-Promoting Plasma Membrane Phospholipids.
Inventors: Therese Wiedmer and Peter J. Sims
Assignment: The Blood Center Research Fndn.

U.S. Patent No.6,534,640
Issued: March 18, 2003
Methods and Compositions to Alter the Cell Surface Expression of Phosphatidylserine and Other Clot-Promoting Plasma Membrane Phospholipids.
Inventors: Therese Wiedmer and Peter J. Sims

Assignment: The Blood Center Research Fndn.

U.S. Patent No. 6,916,654
(Issued: July 12, 2005)
"Universal Donor Cells"
Inventors: Peter J. Sims, A. Bothwell, S. Squinto, E. Elliot, R. Flavell, J. Madri, S. Rollins, L. Bell
Assignment: Oklahoma Medical Research Foundation, Yale University, Alexion Pharmaceuticals

PROFESSIONAL ACTIVITIES:

Journal Review:

Biochemistry
Biochimica Biophysica Acta
Biophysical Journal
Blood
Journal of Biological Chemistry
Journal of Clinical Investigation
Journal of General Physiology
Journal of Immunology
Journal of Laboratory & Clinical Medicine
Journal of Membrane Biology
Journal of Molecular Biology
Proceedings of the National Academy of Sciences
Thrombosis Research

Grant Review:

Site Visit Review Committee, N.I.H. Sickle Cell SCOR Program
Consultant, 41st Meeting of the Blood Diseases and Resources Advisory Committee, NHLBI, N.I.H. 10-26-89
Ad Hoc Reviewer, National Science Foundation,
Biologic Instrumentation Program
Physiology, Cell & Molecular Biology Program
Ad Hoc Reviewer, National Institutes of Health
Biophysics, Biological Chemistry Study Section
Hematology, Study Section 2 (1991)
Ad Hoc Reviewer, VA Merit Award Review
Veteran's Administration Medical Research Service Merit Review
Board for Hematology 1989-1992
American Heart Association Thrombosis Research Study Committee (1992-1995)
Member, N.I.H. Hematology 1 Study Section (1996-2001)
Chairman, N.I.H. Hematology 1 Study Section (1999-2001)
Member, N.I.H. Erythrocyte & Leukocyte Biology Study Section (2005-20100

Founding Scientist & Scientific Advisory Board Member:

Alexion Pharmaceuticals, Inc. (New Haven, CT)	1992-1997
Thrombosys, Inc. (Philadelphia, PA)	1994-1996

Committee Service:

American Association of Immunologists
Co-Chairman, Complement & Immunoglobulin Subsection 1996 - 1998
American Society of Hematology
Coordinating reveiwer; Disorders of platelet production and function 1996
Member Scientific Subcommittee on Platelets 1999-2003
American Heart Association, Oklahoma Affiliate

President	1990-1991
President Elect	1989-1990
Chairman, Research Commitee	1988-1989
Member, Board of Directors	1988-Present

University of Virginia School of Medicine
Medical Scientist Training Program (Admissions & Advisory)
1983-1985
Interdepartmental Biophysics Program "
Interdepartmental Immunology Program "
Doctoral Dissertation Committee
(William Zaks, Dept. of Pharmacology)
Oklahoma Medical Research Foundation
Human Investigations Committee 1987- 1991
Oklahoma Blood Institute
Planning Committee, Transfusion Medicine Program 1985-1990
Medical Policy Advisory Committee 1985-1990
Oklahoma University Health Sciences Campus
Doctoral Dissertation Committee:
Scott Rollins, Dept. of Microbiology & Immunology
Robin Paulk, "
Richard Harris, "
Izumi Yokoyama, "
M.D./Ph.D Program Advisory and Admissions Committee 1988-1990
Blood Center of Southeastern Wisconsin
Executive Committee 1992 -1998
Chairman-Institutional Biosafety Committee 1996- 1998
The Scripps Research Institute
Professor, TSRI Graduate Program 1999-
Macromolecular and Cellular Structure and Chemistry

PUBLICATIONS

1. Sims PJ, Waggoner AS, Wang C-H and Hoffman JF (1974). Studies on the mechanism by which cyanine dyes measure membrane potential in red blood cells and phosphatidylcholine vesicles. Biochemistry 13:3315-3330.

2. Sims PJ and Lauf PK (1978). Steady-state analysis of tracer exchange across the C5b-9 complement lesion in a biological membrane. Proc. Natl. Acad. Sci. USA 75:5669-5673.

3. Sims PJ and Lauf PK (1980). Analysis of solute diffusion across the C5b-9 membrane lesion of complement: Evidence that individual C5b-9 complexes do not function as discrete, uniform pores. J. Immunol. 125:2617-2625.

4. Sims PJ (1980). Solute flow across C5b-9 erythrocyte ghosts: Molecular analysis of membrane damage by the terminal complement proteins. Ph.D. Thesis, Duke University School of Medicine, Durham, N.C.

5. Sims PJ and Boswell EB (1981). Elevated platelet bound IgG associated with an episode of thrombotic thrombocytopenic purpura. Blood 58:682-684.

6. Sims PJ (1981). Permeability characteristics of complement-damaged membranes: Evaluation of the membrane leak generated by the complement proteins C5b-9. Proc. Natl. Acad. Sci. USA 78:1838-1842.

7. Sims PJ (1983). Complement pores in erythrocyte membranes: Analysis of C8/C9 binding required for functional membrane damage. Biochim. Biophys. Acta 732:541-552.

8. Sims PJ and Boswell EB (1983). The measurement of platelet-associated IgG by a microplate quantitative antiglobulin consumption assay using automated through-the-well spectrophotometry. J. Lab. Clin. Med. 102:352-360.

9. Sims PJ and Wiedmer T (1984). The influence of electrochemical gradients of Na^+ and K^+ upon the membrane binding and pore forming activity of the terminal complement proteins. J. Membr. Biol. 78:169-176.

10. Sims PJ (1984). Complement protein C9 labeled with fluorescein isothiocyanate can be used to monitor C9 polymerization and formation of the cytolytic membrane lesion. Biochemistry 23:3248-3260.

11. Sims PJ and Wiedmer T (1984). Kinetics of polymerization of a fluoresceinated derivative of complement protein C9 by the membrane-bound complex of complement proteins C5b-8. Biochemistry 23:3260-3267.

12. Wiedmer T and Sims PJ (1985). Cyanine dye fluorescence used to measure membrane potential changes due to the assembly of complement proteins C5b-9. J. Membr. Biol. 84:249-258.

13. Cheng K-H, Wiedmer T, and Sims PJ (1985). Fluorescence resonance energy transfer study of the associative state of membrane-bound complexes of complement proteins C5b-8. J. Immunol. 135:459-464.

14. Wiedmer T and Sims PJ (1985). Effect of complement proteins C5b-9 on blood platelets: Evidence for reversible depolarization of membrane potential. J. Biol. Chem. 260:8014-8019.

15. Parker CJ, Wiedmer T, Sims PJ, and Rosse WF (1985). Characterization of the complement sensitivity of Paroxysmal Nocturnal Hemoglobinuria erythrocytes. J. Clin. Invest. 75:2074-2084.

16. Sims PJ and Wiedmer T (1986). Repolarization of the membrane potential of blood platelets after complement damage: Evidence for a Ca^{++}-dependent exocytotic elimination of C5b-9 pores. Blood 68:556-561.

17. Wiedmer T, Esmon CT, and Sims PJ (1986). Complement proteins C5b-9 stimulate procoagulant activity through platelet prothrombinase. Blood 68:875-880

18. Benz R, Schmid A, Wiedmer T, and Sims PJ (1986). Single- channel analysis of the conductance fluctuations induced in lipid bilayer membranes by complement proteins C5b-9. J. Membr. Biol. 94:37-45.

19. Wiedmer T, Esmon CT, and Sims PJ (1986). On the mechanism by which complement proteins C5b-9 increase platelet prothrombinase activity. J. Biol. Chem. 261:14587-14592.

20. Hamilton KK and Sims PJ (1987). Changes in cytosolic Ca^{2+} associated with von Willebrand factor release in human endothelial cells exposed to histamine: Study of microcarrier cell monolayers using the fluorescent probe Indo-1. J. Clin. Invest. 79:600-608.

21. Wiedmer T, Ando B, and Sims PJ (1987). Complement C5b-9-stimulated platelet secretion is associated with a Ca^{2+}-initiated activation of cellular protein kinases. J. Biol. Chem. 262:13674-13681.

22. Stearns DJ, Kurosawa S, Sims PJ, Esmon NL, and Esmon CT (1988) The interaction of a Ca^{2+}-dependent monoclonal antibody with the protein C activation peptide region: Evidence for obligatory Ca^{2+} binding to both antigen and antibody. J Biol. Chem. 263:826-832.

23. Ando B, Wiedmer T, Hamilton KK and Sims PJ (1988). Complement proteins C5b-9 initiate secretion of platelet storage granules without increased binding of fibrinogen or von Willebrand factor to newly expressed cell surface GPIIb-IIIa. J Biol. Chem. 263:11907-11914.

24. Sims PJ, Faioni EM, Wiedmer T, and Shattil SJ (1988). Complement proteins C5b-9 cause release of membrane vesicles from the platelet surface that are enriched in the membrane receptor for coagulation factor Va and express prothrombinase activity. J. Biol. Chem. 263:18205-18212.

25. Ando B, Wiedmer T, and Sims PJ (1989). The secretory release reaction initiated by complement proteins C5b-9 occurs without platelet aggregation through GPIIb-IIIa. Blood. 73:462-467.

26. Sims PJ (1989). Interaction of human platelets with the complement system. Chapter 18, IN Platelet Immunobiology, Molecular and Clinical Aspects, (Kunicki TJ, George JN, eds.), JB Lippincott, Philadelphia. 354-383.

27. Hattori R, Hamilton KK, McEver RP, and Sims PJ (1989). Complement proteins C5b-9 induce secretion of high molecular weight multimers of endothelial von Willebrand factor and translocation of granule membrane protein GMP-140 to the cell surface. J. Biol. Chem. 264:9053-9060.

28. Hattori R, Hamilton KK, Fugate RD, McEver RP, and Sims PJ (1989). Stimulated secretion of endothelial von Willebrand factor is accompanied by rapid redistribution to the cell surface of the intracellular granule membrane protein GMP-140. J. Biol. Chem. 264:7768-7771.

29. Sims PJ, Wiedmer T, Esmon CT, Weiss HJ, and Shattil SJ (1989). Assembly of the platelet prothrombinase complex is linked to vesiculation of the platelet plasma membrane. Studies in Scott Syndrome: An isolated defect in platelet procoagulant activity. J. Biol. Chem. 264:17049-17057.

30. Van der Meer BW, Fugate RD, and Sims PJ (1989). Complement proteins C5b-9 induce transbilayer migration of membrane phospholipids. Biophys. J. 56:935-946.

31. Sims PJ, Rollins SA, and Wiedmer T (1989). Regulatory control of complement on blood platelets: Modulation of platelet procoagulant responses by a membrane inhibitor of the C5b-9 complex. J. Biol. Chem. 264:19228-19235.

32. Spivak JL, Sims PJ, and Selby GB (1989). The Anemias. In Hematology 1989 (P.H. Levine, ed.), Grune & Stratton, Philadelphia, 1-8.

33. Sims PJ (1990). Plasma proteins: Complement. Chapter 132. In Hematology: Basic Principles and Practice (E. Benz, H. Cohen, B. Furie, R. Hoffman, S. Shattil, eds). Churchill Livingstone, NY. 1582-1591.

34. Wiedmer T, Shattil SJ, Cunningham M, and Sims PJ (1990). Role of calcium and calpain in complement-induced vesiculation of the platelet plasma membrane and in the exposure of the platelet factor Va receptor . Biochemistry 29:623-632.

35. Hamilton KK, Hattori R, Esmon CT, and Sims PJ (1990). Complement proteins C5b-9 induce vesiculation of the endothelial plasma membrane and expose catalytic surface for assembly of the prothrombinase enzyme complex. J. Biol. Chem. 265: 3809-3814.

36. Rollins SA and Sims PJ (1990). Complement inhibitory activity of CD59 resides in its capacity to block incorporation of activated C9 into membrane C5b-9. J. Immunol., 144:3478-3483.

37. Hamilton KK, Zhao J, Rollins S, Stewart BH, and Sims PJ (1990). Regulatory control of the terminal complement proteins at the surface of human endothelial cells: Neutralization of a C5b-9 inhibitor by antibody to CD59. Blood 76:2572-2577.

38. Gerrard JM, Lint D, Sims PJ, Wiedmer T, Fugate RD, McMillan E, Robertson C, and Israels SJ (1991). Identification of a platelet dense granule membrane protein that is deficient in a patient with the Hermansky-Pudlak syndrome. Blood 77:101-112.

39. Harris R, Sims PJ, and Tweten RK (1991). Kinetic aspects of the aggregation of Clostridium perfringens-toxin on erythrocyte membranes: A fluorescence energy transfer study. J. Biol. Chem. 266:6936-6941.

40. Sims PJ, Ginsberg MH, Plow EF, and Shattil SJ (1991). Effect of platelet activation on the conformation of the plasma membrane glycoprotein IIb-IIIa complex. J. Biol. Chem. 266:7345-7352.

41. Rollins SA, Zhao J, Ninomiya H, and Sims PJ (1991). Inhibition of homologous complement by CD59 is mediated by a species-selective recognition conferred through binding to C8 within C5b-8 or C9 within C5b-9. J. Immunol. 146:2345-2351.

42. Tweten RK, Harris RW, and Sims PJ (1991). Isolation of a tryptic fragment from clostridium perfringens □-toxin that contains sites for membrane binding and for self-aggregation. J. Biol. Chem. 266:12449-12454.

43. Zhao J, Rollins SA, Maher SE, Bothwell ALM, and Sims PJ (1991). Amplified gene expression in CD59-transfected Chinese hamster ovary cells confers protection against the membrane attack complex of human complement. J. Biol. Chem. 266:13418-13422.

44. Harris RW, Sims PJ, and Tweten RK (1991). Evidence that Clostridium perfringens theta-toxin induces the colloid osmotic lysis of erythrocytes. Infect. Immun. 59:2499-2501.

45. Sims PJ, and Wiedmer T (1991). The response of human platelets to activated components of the complement system. Immunol. Today 12:338-342.

46. Gilbert GE, Sims PJ, Wiedmer T, Furie B, Furie BC, and Shattil SJ (1991). Platelet-derived microparticles express high affinity receptors for factor VIII. J. Biol. Chem. 266:17261-17268.

47. Wiedmer T, and Sims PJ (1991). Participation of protein kinases in complement C5b-9-induced shedding of platelet plasma membrane vesicles. Blood 78:2880-2886.

48. Hamilton KK, and Sims PJ (1991). The terminal complement proteins C5b-9 augment binding of high density lipoprotein and its apoproteins A-I and A-II to human endothelial cells. J. Clin. Invest. 88:1833-1840.

49. Bevers EM, Wiedmer T, Comfurius P, Shattil SJ, Weiss HJ, Zwaal RFA, and Sims PJ (1992). Defective Ca^{2+}-induced microvesiculation and deficient expression of procoagulant activity in erythrocytes from a patient with a bleeding disorder: A study of the red blood cells of Scott Syndrome. Blood. 79:380-388.

50. Ninomiya H, Stewart BH, Rollins SA, Zhao J, Bothwell ALM, and Sims PJ (1992). Contribution of *N*-linked carbohydrate of erythrocyte antigen CD59 to its complement-inhibitory activity. J. Biol. Chem. 267:8404-8410.

51. Ninomiya H and Sims PJ (1992). The human complement regulatory protein CD59 binds to the α-chain of C8 and to the "b" domain of C9. J. Biol. Chem. 267:13675-13680.

52. Hahn WC, Menu E, Bothwell ALM, Sims PJ, and Bierer BE (1992). Overlapping but nonidentical binding sites on CD2 for CD58 and a second ligand CD59 Science 256:1805-1807.

53. Braga LL, Eacker S, Ninomiya H, Wiedmer T, McCoy JJ, Pahn C, Sims PJ, and Petri Jr WA (1992). Inhibition of the.complement membrane attack complex by the galactose-specific adhesin of *Entamoeba histolytica*. J. Clin. Invest. 90:1131-1137.

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55. Dahlbäck B, Wiedmer T, and Sims PJ (1992). Binding of anticoagulant vitamin K-dependent protein S to platelet-derived microparticles. Biochemistry 31:12769-12777.

56. Hamilton KK, Zhao J, and Sims PJ (1993). Interaction between apolipoproteins A-I and A-II and the membrane attack complex of complement: Affinity of the apoproteins for polymeric C9. J. Biol. Chem. 268:3632-3638.

57. Chang C-P, Zhao J, Wiedmer T, and Sims PJ (1993). Contribution of platelet microparticle formation and granule secretion to the transmembrane migration of phosphatidylserine. J. Biol. Chem. 268:7171-7178.

58. Wiedmer T, Hall SE, Ortel TL, Kane WH, Rosse WF, and Sims PJ (1993). Complement-induced vesiculation and exposure of membrane prothrombinase sites in platelets of paroxysmal nocturnal hemoglobinuria. Blood 82:1192-1196.

59. Sims PJ and Wiedmer T (1993). Complement Biology. Chapter 12. In Hematology: Basic Principles and Practice (E. Benz, H. Cohen, B. Furie, R. Hoffman, S. Shattil, eds). Churchill Livingstone, NY.

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